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$FILE 'HOME' ENTERED AT 16:31:40 ON 27 SEP 2004

=> file biosis agricola caplus caba
=> s moss or physcomitrella or funaria or sphagnum or ceratodon or marchantia or
L1        30344 MOSS OR PHYSCOMITRELLA OR FUNARIA OR SPHAGNUM OR CERATODON OR
                MARCHANTIA OR SPHAEROCARPOS

=> s l1 and transform?
L2          560 L1 AND TRANSFORM?

=> s l2 and py<2000
   2 FILES SEARCHED...
L3          364 L2 AND PY<2000

=> duplicate remove l3
L4           270 DUPLICATE REMOVE L3 (94 DUPLICATES REMOVED)

=> d ti 1-50

L4   ANSWER 1 OF 270  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Solid matrix control of seed conditioning using selected cell cycle stages

L4   ANSWER 2 OF 270  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Protein and cDNA sequences of starch R1 phosphorylation proteins, and uses
     thereof for altering starch phosphorylation in transgenic plants

L4   ANSWER 3 OF 270  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Structural, electrical, and optical property studies of indium-doped
     Hg0.8Cd0.2Te/Cd0.96Zn0.04Te heterostructures

L4   ANSWER 4 OF 270  BIOSIS  COPYRIGHT (c) 2004 The Thomson Corporation on STN
TI   State of the art of technologies for metal removal from industrial
     effluents.

L4   ANSWER 5 OF 270  BIOSIS  COPYRIGHT (c) 2004 The Thomson Corporation on STN
TI   Transgene expression in the   ***moss***     ***Ceratodon***   purpureus.

L4   ANSWER 6 OF 270  BIOSIS  COPYRIGHT (c) 2004 The Thomson Corporation
TI   The transition to pleurocarpy: A phylogenetic analysis of the main
     diplolepidous lineages based on rbcL sequences and morphology.

L4   ANSWER 7 OF 270  AGRICOLA  Compiled and distributed by the National
     Agricultural Library of the Department of Agriculture of the United States
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     (2004) on STN
TI   Cytokinin oxidase from Zea mays: purification, cDNA cloning and expression
     in   ***moss***   protoplasts.

L4   ANSWER 8 OF 270  BIOSIS  COPYRIGHT (c) 2004 The Thomson Corporation.  on
TI   Photoautotrophic cultures of the host and   ***transformed***   cells of
       ***Marchantia***   polymorpha under controlled incident light intensity.

L4   ANSWER 9 OF 270  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Modulated optical solid-state spectrometer applications in plasma
     diagnostics

L4   ANSWER 10 OF 270  BIOSIS  COPYRIGHT (c) 2004 The Thomson Corporation.  on
TI   The spatial distribution of larvae of Culicoides impunctatus biting
     midges.

L4   ANSWER 11 OF 270  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Molecular genetics of   ***Physcomitrella***
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L4 ANSWER 12 OF 270 CAPLUS COPYRIGHT 2004 ACS on STN
TI Structural and isotopic evidence for in-situ formation of DOM in Peatland

L4 ANSWER 13 OF 270 CAPLUS COPYRIGHT 2004 ACS on STN
TI Synthesis of paleatin B, an open-chain natural bis(bibenzyl) constituent of ***Marchantia*** paleacea var. diptera

L4 ANSWER 14 OF 270 CABA COPYRIGHT 2004 CABI on STN
TI Short-term effects of changing water table on N2O fluxes from peat monoliths from natural and drained boreal peatlands.

L4 ANSWER 15 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI A specific member of the Cab multigene family can be efficiently targeted and disrupted in the ***moss*** ***Physcomitrella*** patens.

L4 ANSWER 16 OF 270 CABA COPYRIGHT 2004 CABI on STN
TI ***Transformation*** of the elemental composition of plants in northern taiga biogeocoenoses under air pollution impact.

L4 ANSWER 17 OF 270 CAPLUS COPYRIGHT 2004 ACS on STN
TI Particle bombardment mediated ***transformation*** and GFP expression in the ***moss*** ***Physcomitrella*** patens

L4 ANSWER 18 OF 270 CAPLUS COPYRIGHT 2004 ACS on STN
TI Plastid promoters for transgene expression in the plastids of higher plants

L4 ANSWER 19 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Tripe palms associated with systemic mastocytosis: The role of ***transforming*** growth factor-alpha and efficacy of interferon-alfa.

L4 ANSWER 20 OF 270 CAPLUS COPYRIGHT 2004 ACS on STN
TI Characteristics of Sapropel (lake-deposit)

L4 ANSWER 21 OF 270 CABA COPYRIGHT 2004 CABI on STN
TI Aphids in wetland biotopes of Switzerland (fens and raised bogs).

L4 ANSWER 22 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Testing a nitrogen-cycling model of a forest stream by using a nitrogen-15 tracer addition.

L4 ANSWER 23 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Blue light but not red light induces a calcium transient in the ***moss*** ***Physcomitrella*** patens (Hedw.) B., S. and G.

L4 ANSWER 24 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Characterization of peat fulvic acid fractions by means of FT-IR, SERS, and 1H, 13C NMR spectroscopy.

L4 ANSWER 25 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Statistical analyses for heavy metal contents in till and root samples in an area of southeastern Sweden.

L4 ANSWER 26 OF 270 CABA COPYRIGHT 2004 CABI on STN
TI ***Physcomitrella*** and Arabidopsis: the David and Goliath of reverse genetics.

L4 ANSWER 27 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Expression of the bacterial ipt gene in ***Physcomitrella*** rescues mutations in budding and in plastid division.

L4 ANSWER 28 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on

TI Spectroscopic characterization of pyrophosphate incorporation during extraction of peat humic acids.

L4 ANSWER 29 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Geographic classification of heavy metal concentrations in mosses and stream sediments in the Federal Republic of Germany.

L4 ANSWER 30 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI DNA content of two cytotypes of ***Funaria*** hygrometrica.

L4 ANSWER 31 OF 270 CABA COPYRIGHT 2004 CABI on STN
TI Response: targeting Arabidopsis.

L4 ANSWER 32 OF 270 CABA COPYRIGHT 2004 CABI on STN
TI Towards targeted ***transformation*** in plants.

L4 ANSWER 33 OF 270 CAPLUS COPYRIGHT 2004 ACS on STN
TI Use of mosses (Hylocomium splendens and Pleurozium schreberi) as biomonitors of heavy metal deposition: from relative to absolute deposition values

L4 ANSWER 34 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Identification of a novel DELTA6-acyl-group desaturase by targeted gene disruption in ***Physcomitrella*** patens.

L4 ANSWER 35 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Development, genetics and molecular biology of mosses.

L4 ANSWER 36 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Influence of industrial pollution on forests state of Novgorod Region.

L4 ANSWER 37 OF 270 CAPLUS COPYRIGHT 2004 ACS on STN
TI Emissions from smoldering combustion of biomass measured by open-path Fourier ***transform*** infrared spectroscopy

L4 ANSWER 38 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Disruption of the plastid ycf10 open reading frame affects uptake of inorganic carbon in the chloroplast of Chlamydomonas.

L4 ANSWER 39 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Efficient gene targeting in the ***moss*** ***Physcomitrella*** patens.

L4 ANSWER 40 OF 270 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
TI Methane and carbon dioxide exchange potentials of peat soils in aerobic and anaerobic laboratory incubations.

L4 ANSWER 41 OF 270 CAPLUS COPYRIGHT 2004 ACS on STN
TI Characterization of humic substances using FTIR, SERS and (1H, 13C, 31P) NMR spectroscopy

L4 ANSWER 42 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Efficient ***transformation*** of ***Marchantia*** polymorpha that is haploid and has very small genome DNA.

L4 ANSWER 43 OF 270 CAPLUS COPYRIGHT 2004 ACS on STN
TI Microbial glucose ***transformation*** in sediment after liming of the acidified Lake Gaardsjoen, Sweden

L4 ANSWER 44 OF 270 CAPLUS COPYRIGHT 2004 ACS on STN
TI Humus composition and ***transformation*** in a pergelic Terric Cryohemist of coastal continental Antarctica

L4 ANSWER 45 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Isolation, purification and characterization of UDP-glucose: CIS-p-coumaric acid beta-D- glucosyltransferase from ***Sphagnum*** fallax.

L4 ANSWER 46 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN DUPLICATE 18
TI Endo-1,3-beta-glucanase and cellulase from Trichoderma harzianum: Purification and partial characterization, induction of and biological activity against plant pathogenic Pythium spp.

L4 ANSWER 47 OF 270 CAPLUS COPYRIGHT 2004 ACS on STN
TI Optical characterization of Pb1-xSnxTe layers by infrared transmission

L4 ANSWER 48 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Brachycytes in ***Funaria*** protonemata: Induction by abscisic acid and fine structure.

L4 ANSWER 49 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI High frequency genetic ***transformants*** of ***Physcomitrella*** patens possess an autonomously replicating, extrachromosomal, concatemeric, transgenic element.

L4 ANSWER 50 OF 270 CAPLUS COPYRIGHT 2004 ACS on STN
TI Holocene climate effects on the development of a peatland on the Tuktoyaktuk Peninsula, Northwest Territories

=> d bib abs 42 39 34 27 17 5 8

L4 ANSWER 42 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
AN 1998:180463 BIOSIS
DN PREV199800180463
TI Efficient ***transformation*** of ***Marchantia*** polymorpha that is haploid and has very small genome DNA.
AU Nasu, Masao; Tani, Katsuji [Reprint author]; Hattori, Chizuko; Hondaa, Motoyasu; Shimaoka, Taise; Yamaguchi, Nobuyasu; Katoh, Kenji
CS Environ. Sci. Microbiol., Fac. Pharm. Sci., Osaka Univ., 1-6 Yamadaoka, Suita, Osaka 565, Japan
SO Journal of Fermentation and Bioengineering, (1997) Vol. 84, No. 6, pp. 519-523. print.
CODEN: JFBIEX. ISSN: 0922-338X.
DT Article
LA English
ED Entered STN: 20 Apr 1998
Last Updated on STN: 20 Apr 1998
AB The genomic DNA content of a cultured cell of ***Marchantia*** polymorpha HYA-2F was examined using a now cytometer. It was estimated to be 0.32 pg (C), with a G + C content of 57.1%. The DNA content was less than that of Arabidopsis thaliana. The frequency of ***transformation*** by Agrobacterium tumefaciens using a binary vector plasmid pBI121 in the presence of acetosyringone was approximately 10%. GUS expression analysis and Southern blotting analysis of the genomic DNA of ***transformants*** revealed that all regions of T-DNA on plasmid pBI121 were integrated into the genome of M. polymorpha.

L4 ANSWER 39 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
AN 1997:345271 BIOSIS

DN PREV199799644474
TI Efficient gene targeting in the ***moss*** ***Physcomitrella*** patens.
AU Schaefer, Didier G. [Reprint author]; Zyrd, Jean-Pierre
CS Laboratoire de Phytogenetique Cellulaire, Universite de Lausanne, Batiment de Biologie, CH-1015 Lausanne-Dorigny, Switzerland
SO Plant Journal, (1997) Vol. 11, No. 6, pp. 1195-1206.
ISSN: 0960-7412.
DT Article
LA English
ED Entered STN: 11 Aug 1997
Last Updated on STN: 11 Aug 1997
AB The ***moss*** ***Physcomitrella*** patens is used as a genetic model system to study plant development, taking advantage of the fact that the haploid gametophyte dominates in its life cycle.
Transformation experiments designed to target three single-copy genomic loci were performed to determine the efficiency of gene targeting in this plant. Mean ***transformation*** rates were 10-fold higher with the targeting vectors and molecular evidence for the integration of exogenous DNA into each targeted locus by homologous recombination is provided. The efficiency of gene targeting determined in these experiments is above 90%, which is in the range of that observed in yeast and several orders of magnitude higher than previous reports of gene targeting in plants. Thus, gene knock-out and allele replacement approaches are directly accessible to study plant development in the ***moss*** ***Physcomitrella*** patens. Moreover, efficient gene targeting has so far only been observed in lower eukaryotes such as protozoa, yeasts and filamentous fungi, and, as shown here the first example from the plant kingdom is a haplobiontic ***moss*** . This suggests a possible correlation between efficient gene targeting and haplophase in eukaryotes.

L4 ANSWER 34 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
AN 1998:362615 BIOSIS
DN PREV199800362615
TI Identification of a novel DELTA6-acyl-group desaturase by targeted gene disruption in ***Physcomitrella*** patens.
AU Girke, Thomas; Schmidt, Hermann; Zaehringer, Ulrich; Reski, Ralf; Heinz, Ernst [Reprint author]
CS Univ. Hamburg, Inst. Allg. Bot., Ohnhorststr. 18, D-22609 Hamburg, Germany
SO Plant Journal, (July, 1998) Vol. 15, No. 1, pp. 39-48. print.
ISSN: 0960-7412.
DT Article
LA English
OS EMBL-AJ222980; EMBL-AJ222981
ED Entered STN: 27 Aug 1998
Last Updated on STN: 21 Oct 1998
AB The ***moss*** ***Physcomitrella*** patens contains high levels of arachidonic acid. For its synthesis from linoleic acid by desaturation and elongation, novel DELTA5- and DELTA6- desaturases are required. To isolate one of these, PCR-based cloning was used, and resulted in the isolation of a full-length cDNA coding for a putatively new desaturase. The deduced amino acid sequence has three domains: a N-terminal segment of about 100 amino acids, with no similarity to any sequence in the data banks, followed by a cytochrome b5-related region and a C-terminal sequence with low similarity (27% identity) to acyl-lipid desaturases. To elucidate the function of this protein, we disrupted its gene by ***transforming*** P. patens with the corresponding linear genomic sequence, into which a positive selection marker had been inserted. The molecular analysis of five ***transformed*** lines showed that the selection cartridge had been inserted into the corresponding genomic locus of all five lines. The gene disruption resulted in a dramatic alteration of the fatty acid pattern in the knockout plants. The large increase in

linoleic acid and the concomitant disappearance of gamma-linolenic and arachidonic acid in all knockout lines suggested that the new cDNA coded for a DELTA6-desaturase. This was confirmed by expression of the cDNA in yeast and analysis of the resultant fatty acids by GC-MS. Only the ***transformed*** yeast cells were able to introduce a further double bond into the DELTA6-position of unsaturated fatty acids. To our knowledge, this is the first report of a successful gene disruption in a multicellular plant resulting in a specific biochemical phenotype.

L4 ANSWER 27 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
AN 1998:448697 BIOSIS
DN PREV199800448697
TI Expression of the bacterial ipt gene in ***Physcomitrella*** rescues mutations in budding and in plastid division.
AU Reutter, Kirsten; Atzorn, Rainer; Hadeler, Birgit; Schmuelling, Thomas; Reski, Ralf [Reprint author]
CS Albert-Ludwigs-Universitaet, Institut fuer Biologie II, Schaenzlestr. 1, D-79104 Freiburg, Germany
SO Planta (Berlin), (Oct., 1998) Vol. 206, No. 2, pp. 196-203. print. CODEN: PLANAB. ISSN: 0032-0935.
DT Article
LA English
ED Entered STN: 21 Oct 1998
Last Updated on STN: 21 Oct 1998
AB Development of ***Physcomitrella*** patens (Hedw.) B.S.G. starts with a filamentous protonema growing by apical cell division. As a developmental switch, some subapical cells produce three-faced apical cells, the so-called buds, which grow to form leafy shoots, the gametophores. Application of cytokinins enhances bud formation but no subsequent gametophore development in several mosses. We used the ipt gene of Agrobacterium tumefaciens, encoding a protein which catalyzes the rate-limiting step in cytokinin biosynthesis, to ***transform*** two developmental ***Physcomitrella*** mutants. One mutant (P24) was defective in budding (bud) and thus did not produce three-faced cells, while the other one (PC22) was a double mutant, defective in plastid division (pdi), thus possessing at the most one giant chloroplast per cell, and in gametophore development (gad), resulting in malformed buds which could not differentiate into leafy gametophores. Expression of the ipt gene rescued the mutations in budding and in plastid division but not the one in gametophore development. By mutant rescue we provide evidence for a distinct physiological difference between externally applied and internally produced cytokinins. Levels of immunoreactive cytokinins and indole-3-acetic acid were determined in tissues and in culture media of the wild-type ***moss*** , both mutants and four of their stable ipt ***transformants*** . Isopentenyl-type cytokinins were the most abundan cytokinins in ***Physcomitrella*** , whereas zeatin-type cytokinins, the major native cytokinins of higher plants, were not detectable. Cytokinin as well as auxin levels were enhanced in ipt transgenics, demonstrating a cross-talk between both metabolic pathways. In all genotypes, most of the cytokinin and auxin was found extracellularly. These extracellular pools may be involved in hormone transport in the non-vascular mosses. We suggest that both mutants are defective in signal-transduction rather than in cytokinin metabolism.

L4 ANSWER 17 OF 270 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:187047 CAPLUS
DN 130:307285
TI Particle bombardment mediated ***transformation*** and GFP expression in the ***moss*** ***Physcomitrella*** patens
AU Cho, Sung-Hyun; Chung, Young-Soo; Cho, Sung-Ki; Rim, Yong-Woo; Shin, Jeong-Sheop
CS Graduate School of Biotechnology, Korea University, Seoul, 136-701, S. Korea

SO Molecules and Cells (***1999***), 9(1), 14-19
CODEN: MOCEEK; ISSN: 1016-8478
PB Springer-Verlag Singapore Pte. Ltd.
DT Journal
LA English
AB There are few plants facilitated for the study of development, morphogenesis and gene expression at the cellular level. The ***moss*** ***Physcomitrella*** patens can be a very useful plant with several advantages: simple life cycle contg. a major haploid gametophyte stage, easy manipulation, small genome size (6 .times. 108 bp) and high similarities with higher plants. To establish the ***transformation*** system of mosses as a model for basic plant research, a series of expts. were performed. Mosses were cultured in cellophane overlaid BCD media, ***transformed*** by particle bombardment and selected by the choice of appropriate antibiotics. Initial ***transformants*** appeared 8 or 14 days after selection, showing different sensitivities toward the antibiotics used. Heat treatment during the prepn. of particles revealed that denaturing the DNA enabled a more efficient way to deliver a transgene into the chromosome. This was proven by the increase in the no. of ***transformants*** by five times in the plants with denatured DNA. In the test for the repairing capacity of mosses, 154 and 195 ***transformants*** survived from 1 and 3 days incubations, resp., indicating that a longer period of incubation seemed to be recommendable for better survival. The selected ***transformants*** were further analyzed at the DNA and expression level. ***Transformed*** genes were confirmed by PCR where all the ***transformants*** showed the expected size of amplification. Histochem. .beta.-glucuronidase (GUS) and green fluorescent protein (GFP) expression also confirmed the integration of exogenous DNA. In a comparison of the two different forms of GFP, sol.-modified GFP (smGFP) expressed stronger signals than modified GFP (mGFP) due to its improved soly. Confirmation of the transgene in the chloroplast ***transformation*** has improved the applicability of ***moss*** as a model system for the study of basic biol. researches.
RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
AN 1999:356531 BIOSIS
DN PREV199900356531
TI Transgene expression in the ***moss*** ***Ceratodon*** purpureus.
AU Zeidler, Mathias [Reprint author]; Hartmann, Elmar; Hughes, Jon
CS Freie Universitaet Berlin, Institut fuer Pflanzenphysiologie, Koenigin-Luise-Strasse 12-16, D-14195, Berlin, Germany
SO Journal of Plant Physiology, (May, 1999) Vol. 154, No. 5-6, pp. 641-650. print.
CODEN: JPPHEY. ISSN: 0176-1617.
DT Article
LA English
ED Entered STN: 2 Sep 1999
Last Updated on STN: 2 Sep 1999
AB ***Moss*** protonemal filaments provide a useful plant model system for physiological studies of single cells and, as gametophytes, are attractive targets for mutation analysis. With its ability to grow in darkness, the species ***Ceratodon*** purpureus has proven particularly useful in photobiology. We describe an optimised ***transformation*** procedure for this species. The use of various selectable (HPT, NPT) and screenable (GUS, LUC, GFP) reporters was established and different expression vectors were constructed for both constitutive (P-Actin1) and tetracycline-regulated (P-Top10) gene expression. The fate of transgenes introduced into the cell was monitored utilising a GFP construct by observing the expression pattern throughout recovery from the ***transformation*** procedure and further development.

L4 ANSWER 8 OF 270 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
AN 2000:114037 BIOSIS
DN PREV200000114037
TI Photoautotrophic cultures of the host and ***transformed*** cells of ***Marchantia*** polymorpha under controlled incident light intensity.
AU Hata, Jun-Ichi; Taya, Masahito [Reprint author]; Tani, Katsuji; Nasu, Masao
CS Department of Chemical Science and Engineering, Graduate School of Engineering Science, Osaka University, Toyonaka, Osaka, 560-8531, Japan
SO Journal of Bioscience and Bioengineering, (Nov., 1999) Vol. 88, No. 5, pp. 582-585. print.
ISSN: 1389-1723.
DT Article
LA English
ED Entered STN: 29 Mar 2000
Last Updated on STN: 3 Jan 2002
AB Photoautotrophic cultures of the host and ***transformed*** cells of the liverwort, ***Marchantia*** polymorpha, were examined. In cultures in flat glass flasks under various light intensities, it was found that the growth rates of both the cells increased with increase in light intensity in the range of 0 to 25 W/m2, but further increase in light intensity caused photoinhibition of the growth of the cells. Cultures of both the types of cells under light-controlled conditions using an externally illuminated bioreactor were carried out taking into consideration the inhibition of cell growth by excessive light and the light intensity distributions in the cell suspensions. In these cultures, 2.1 (***transformed*** cells) and 3.3 (host cells) kg dry cell weight per m3 were harvested at culture times of 9.0 and 10 d, respectively. These values were larger than those obtained in cultures of the respective cells at a fixed incident light intensity of 25 W/m2.

=> s l4 and (protein or heterologous)
L5 25 L4 AND (PROTEIN OR HETEROLOGOUS)

=> d ti 1-25

L5 ANSWER 1 OF 25 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI A specific member of the Cab multigene family can be efficiently targeted and disrupted in the ***moss*** ***Physcomitrella*** patens.

L5 ANSWER 2 OF 25 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Expression of the bacterial ipt gene in ***Physcomitrella*** rescues mutations in budding and in plastid division.

L5 ANSWER 3 OF 25 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Identification of a novel DELTA6-acyl-group desaturase by targeted gene disruption in ***Physcomitrella*** patens.

L5 ANSWER 4 OF 25 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Disruption of the plastid ycf10 open reading frame affects uptake of inorganic carbon in the chloroplast of Chlamydomonas.

L5 ANSWER 5 OF 25 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Endo-1,3-beta-glucanase and cellulase from Trichoderma harzianum: Purification and partial characterization, induction of and biological activity against plant pathogenic Pythium spp.

L5 ANSWER 6 OF 25 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI The ***moss*** , ***Physcomitrella*** patens, ***transformed*** with apoaequorin cDNA responds to cold shock, mechanical perturbation and pH with transient increases in cytoplasmic calcium.

L5 ANSWER 7 OF 25 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Tetracycline-regulated reporter gene expression in the ***moss*** ***Physcomitrella*** patens.

L5 ANSWER 8 OF 25 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI The chloroplast gene encoding ribosomal ***protein*** S4 in Chlamydomonas reinhardtii spans an inverted repeat-unique sequence junction and can be mutated to suppress a streptomycin dependence mutation in ribosomal ***protein*** S12.

L5 ANSWER 9 OF 25 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Effects of mechanical signaling on plant cell cytosolic calcium.

L5 ANSWER 10 OF 25 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Studying plant development in mosses: The transgenic route.

L5 ANSWER 11 OF 25 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI Expression of oat phyA cDNA in the ***moss*** ***Ceratodon*** purpureus.

L5 ANSWER 12 OF 25 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI PHOTOREGULATION OF HIGHER PLANT GENES IN THE ***MOSS*** ***PHYSCOMITRELLA*** -PATENS.

L5 ANSWER 13 OF 25 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
TI NUCLEAR ***TRANSFORMATION*** IN ***MARCHANTIA*** -POLYMORPHA SPERMATIDS CYTOCHEMICAL STUDIES IN ELECTRON MICROSCOPY.

L5 ANSWER 14 OF 25 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
TI Analysis of the ***protein*** kinase activity of ***moss*** phytochrome expressed in fibroblast cell culture.

L5 ANSWER 15 OF 25 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
TI Molecular responses to abscisic acid and stress are conserved between ***moss*** and cereals.

L5 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN
TI ***Protein*** and cDNA sequences of starch R1 phosphorylation proteins, and uses thereof for altering starch phosphorylation in transgenic plants

L5 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN
TI Particle bombardment mediated ***transformation*** and GFP expression in the ***moss*** ***Physcomitrella*** patens

L5 ANSWER 18 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN
TI Increased ***protein*** content in transgenic Arabidopsis thaliana over-expressing nitrate reductase activity

L5 ANSWER 19 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN
TI Molecular analysis of chloroplast division

L5 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN
TI Expression of myb-related genes in the ***moss*** , ***Physcomitrella*** patens

L5 ANSWER 21 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN
TI Purification and characterization of recombinant human .beta.1-4 galactosyltransferase expressed in Saccharomyces cerevisiae

L5 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN
TI Interactions between peat and sodium acetate, ammonium sulfate, urea or wheat straw during incubation studied by carbon-13 and nitrogen-15 NMR spectroscopy

L5 ANSWER 23 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN
TI Developmental genetic studies of the ***moss*** , ***Physcomitrella*** patens

L5 ANSWER 24 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN
TI Metabolic activity of rhizoids of the ***moss*** Ricciocarpus natans

L5 ANSWER 25 OF 25 CABA COPYRIGHT 2004 CABI on STN
TI ***Physcomitrella*** and Arabidopsis: the David and Goliath of reverse genetics.

=> d bib abs 20 11 7 6

L5 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1993:402151 CAPLUS
DN 119:2151
TI Expression of myb-related genes in the ***moss*** , ***Physcomitrella*** patens
AU Leech, Mark J.; Kammerer, Wolfgang; Cove, David J.; Martin, Cathie; Wang, Trevor L.
CS Dep. Appl. Genet., AFRC Inst. Plant Sci. Res. Innes, Norwich, NR4 7UH, UK
SO Plant Journal (***1993***), 3(1), 51-61
CODEN: PLJUED; ISSN: 0960-7412
DT Journal
LA English
AB Three cDNA clones encoding proteins contg. a myb-related DNA binding domain have been isolated from a cDNA library prepd. from protonemal tissue of the ***moss*** , P. patens. The three cDNA clones between them encode two different classes of myb-like proteins, termed Pp1 and Pp2, that, outside of the myb domain, show no regions of significant homol. Acidic domains, capable of forming alpha-helical structures, are present in the carboxy-termini of the derived amino acid sequences from both Pp1 and Pp2 cDNAs suggesting that, like other myb genes, these proteins probably function as transcriptional activators. In contrast to other plants, where extensive myb-related gene families are present in the genome, a relatively small family is present in P. patens. Analyses of transcript levels during development of P. patens showed that max. levels of transcription of the two genes occurred in young wild-type protonemal tissue that correlated with the time of max. mitotic index. A decline in the expression of both genes occurs with increasing age of the wild-type tissue. Aberrant levels of expression of the two genes were obsd. in developmental mutants of P. patens which, as well as carrying specific morphol. mutations, have greatly retarded protonemal growth rates. ***Transformation*** of wild-type P. patens with antisense constructs derived from Pp1 and Pp2 cDNA clones led to a dramatically reduced frequency of ***transformants*** when the expression of the reporter gene within the constructs was selected. Taken together, the data strongly suggest that expression of Pp1 and Pp2 is essential for cell growth during normal gametophytic development of P. patens.

L5 ANSWER 11 OF 25 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
AN 1993:118017 BIOSIS
DN PREV199395062117

TI Expression of oat phyA cDNA in the ***moss*** ***Ceratodon*** purpureus.
AU Thuemmler, Fritz [Reprint author]; Schuster, Harald; Bonenberger, Johannes
CS Bot. Inst. der Universitaet Muenchen, Menzingerstrasse 67, D-8000 Muenchen 19, Germany
SO Photochemistry and Photobiology, (1992) Vol. 56, No. 5, pp. 771-776. CODEN: PHCBAP. ISSN: 0031-8655.
DT Article
LA English
ED Entered STN: 27 Feb 1993
Last Updated on STN: 27 Feb 1993
AB The possibility of ***transforming*** ***Ceratodon*** purpureus protoplasts by PEG-mediated direct DNA uptake was tested. ***Transformation*** with a plasmid carrying a kanamycin-resistance gen resulted in kanamycin-resistant colonies of C. purpureus proteonemata. A full-length cDNA clone coding for oat (Avuma sative) phyA phytochrome was isolated. The clone HM4.1 which is 3.7-kb long exhibits about 99% nucleotide sequence identity to the known phytochrome clone AP3. The expression of HM4.1 in C. purpureus protonemata was tested. A construct with the 35S-promotor and the structural gene of HM4.1 was contransformed with the plasmid containing the kanamycin-resistance. Kanamycin-resistant colonies were tested for the presence of HM4.1 sequences in a genomic Southern experiment. Two out of 19 kanamycin-resistant colonies reacted positively with a HM4.1 specific probe. The expression of phyA in the positive colonies was examined with monoclonal antibodies specific for oat phytochrome. The Western blot experiment with ***protein*** extracts of the two positive colonies grown in the dark revealed clear signals at 124-kDa which were not detected in control plants. These data demonstrate the possibility of expressing oat phyA-apoprotein in C. purpureus proteinemata. The transgenic ***moss*** protonemiata did not show phenotypical alterations in response to the foreign phytochrome polypeptide; it is not know at themomoent if the tetrapyrole chromophore is attached to the oat polypeptide in the protonemata or not.

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AN 1996:187773 BIOSIS
DN PREV199698743902
TI Tetracycline-regulated reporter gene expression in the ***moss*** ***Physcomitrella*** patens.
AU Zeidler, Mathias; Gatz, Christiane; Hartmann, Elmar; Hughes, Jon [Reprint author]
CS Institut fuer Pflanzenphysiologie, Freie Universitaet Berlin, Koenigin-Luise-Strasse 12-16, D-14195 Berlin, Germany
SO Plant Molecular Biology, (1996) Vol. 30, No. 1, pp. 199-205. CODEN: PMBIDB. ISSN: 0167-4412.
DT Article
LA English
ED Entered STN: 29 Apr 1996
Last Updated on STN: 29 Apr 1996
AB As ancestors of higher plants, mosses offer advantages as simple model organisms in studying complex processes such as development and signal transduction. Overexpression of transgenes after genetic ***transformation*** is a powerful technique in such studies. To establish a controllable expression system for this experimental approach we expressed a chimeric ***protein*** consisting of the Tn10-encoded Tet repressor and the activation domain of Herpes simplex virion ***protein*** 16 in the ***moss*** ***Physcomitrella*** patens. We showed that this ***protein*** activates transcription from a suitable target promoter (Top10) containing seven operators upstream of a TATA box. In media containing very low levels of tetracycline (1 mg/l), expression levels of a beta-glucuronidase (GUS) reporter gene dropped to lt 1% of that in the absence of tetracycline. This regulation is due to interference of tetracycline with the DNA binding activity of the Tet

repressor portion of the chimeric transcriptional activator. Stable ***transformants*** grown for three weeks on tetracycline-containing media showed negligible GUS activity, whereas GUS was expressed strongly within 24 h of transfer to tetracycline-free media. Potent and stringently regulated expression of other, physiologically active genes is thus readily available in the ***moss*** system using the convenient Top10 expression system.

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AN 1996:332723 BIOSIS
DN PREV199699055079
TI The ***moss*** , ***Physcomitrella*** patens, ***transformed*** with apoaequorin cDNA responds to cold shock, mechanical perturbation and pH with transient increases in cytoplasmic calcium.
AU Russell, A. J. [Reprint author]; Knight, M. R.; Cove, D. J.; Knight, C. D.; Trewavas, A. J.; Wang, T. L.
CS Dep. Applied Genetics, John Innes Cent., Colney Lane, Norwich NR4 7UH, UK
SO Transgenic Research, (1996) Vol. 5, No. 3, pp. 167-170.
ISSN: 0962-8819.
DT Article
LA English
ED Entered STN: 26 Jul 1996
Last Updated on STN: 27 Jul 1996
AB The gene for apoaequorin has been used previously to indicate cytosolic calcium changes in higher plants. Here we report the ***transformation*** of the ***moss*** ***Physcomitrella*** patens with the cDNA for apoaequorin. Stable ***transformants*** were obtained in the wild type which reconstitute the calcium-sensitive luminescent ***protein*** aequorin in vivo after incubation in coelenterazine, and continue to grow normally. The wild type responds to cold-shock (0-10 degree C) with increases in cytosolic calcium. Mechanical perturbation, in the form of touch, also induces transient increases in cytosolic calcium. A smaller response to pH, distinct from the touch response and exhibiting different kinetics, can also be detected.

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L6 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
TI Purification and characterization of recombinant human .beta.1-4 galactosyltransferase expressed in Saccharomyces cerevisiae

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